

System, Computer Product and Method for Providing Billboards with
Pull Technology

5 Field of the Invention

 This invention relates in general to systems, computer products and methods for providing billboard advertising with pull technology. This invention relates more particularly to a system, computer product and method
10 for providing a billboard that is integrated with a communication system with pull technology capabilities whereby the billboard acts as a data gateway for targeted advertising.

Background of the Invention

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 Billboards are well known. They are routinely seen on the side of roads, highways, on vehicles, on buildings and so on. There are numerous existing billboard technologies. For example, posters, advertising screens combined with diffuser panels, light emitter diode (LED) screens, advertising
20 screens combined with frame illumination and so on. Scrolling and rotating billboards are also known, wherein the advertising display portion of the billboard scrolls or rotates. This permits a single billboard to include multiple advertising images.

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 The positive subliminal marketing effect of such billboards is well documented and explains why numerous companies employ such advertising despite the significant costs. In some cities in North America, for example, the monthly cost related to the maintenance of multiple billboard campaigns is in the six-figure dollar range. It is generally well accepted that a significant
30 amount of people pay attention to billboards.

However, once the attention of individuals is brought to the advertising message of a billboard, prior art billboards do not provide means for enhancing the marketing impact of such billboards using targeted advertising.

5 There is a need therefore for providing a system, computer product and method for delivering targeted advertising through a billboard. There is particular need for providing a system, computer product and method for delivering this targeted advertising on a cost efficient basis, using a system that is flexible.

10 Summary of the Invention

An object of one aspect of the present invention is to provide a billboard that is integrated with a communication system with pull technology capabilities whereby the billboard acts as a data gateway for targeted advertising.

20 Brief Description of the Drawings

A detailed description of the preferred embodiment(s) is(are) provided herein below by way of example only and with reference to the following drawings, in which:

25 Figure 1 is a program resource flowchart illustrating the resources of the data delivery system of the present invention.

30 Figure 2 is a program resource flowchart illustrating the resources of the data delivery system in a web implementation of the present invention.

Figure 3 is a program resource flowchart illustrating the resources of the data delivery system of the present invention further comprising a remote functionality.

5 In the drawings, preferred applications of the method of the invention are illustrated by way of example. It is to be expressly understood that the description and drawings are only for the purpose of illustration and as an aid to understanding, and are not intended as a definition of the limits of the invention.

10 Detailed Description of the Preferred Embodiment

A known display means or billboard of a conventional construction (not shown) is provided. The billboard uses one or more technologies for
15 delivering text and graphic content to a billboard as discussed above. Specifically, it is important to note that the billboard may comprise a print advertising or electronic advertising. The present invention also contemplates that billboard is an electronic billboard and comprises a digital graphic content delivery system such as an LED or digital screen, as well as a communication
20 system for remotely managing the content displayed on such billboard as explained below.

Whatever the content delivery system used by the billboard, the billboard of the present invention displays a communication code or
25 communication tag such as a telephone number, telephone acronym, cellular network number (including an abbreviated number such as *88 or the like), and/or an URL. Individuals having viewed the billboard use the communication tag to access a data delivery system **14** that is accessible via the communication tag as best shown in Fig. 1.

30 A variety of communication devices are used by individuals to access the data delivery system **14**, for example individuals may call a telephone

number or abbreviated cell number by means of a cell phone, or on a land line at home, or may access the URL using a mobile browser on a cellular phone, two-way pager, wireless personal digital assistant or the like.

5 In the preferred embodiment of the data delivery system **14** described herein, the data delivery system **14** comprises a communication means (not shown) which utilizes known telephony hardware such as a Private Bureau Exchange **18** or "PBX" combined with fiber optic cabling by means of a series of ports, in a manner that is well known. The PBX **18** is capable of handling a
10 large number of calls/communications.

The PBX **18** is connected to a data selection means or communication input means **21** which comprises means for processing requests made by an individual contacting the data delivery system **14**. The
15 communication input means **21** is best understood as a data access menu which permits requests to be received and processed. The content of each individual menu associated with a particular communication tag is tailored to the requirements of the particular entity or entities that have engaged the use of the billboard of the present invention. For example, in a telephone
20 implementation of the data delivery system **14**, the communication input means **21** comprises a touch tone menu provided in a manner that is well known. Further, in another implementation of the communication input means **21**, said communication input means **21** comprises voice recognition capability, also in a manner that is well known.

25 The communication input means **21** permits the user to access various data and information including for example product or service pricing, specifications, promotions, features, contest information etc., in accordance with input received from the user. Accordingly, the data delivery system **14**
30 permits a user to "pull" selected data or information from the data delivery system **14**.

The PBX 18 is further connected with a communication output means 20 that is used to communicate information tailored to requests made by a caller to the PBX 18 by means of the communication input means 21. The communication output means 20 is operably connected to a communication server 22 capable of communication including by means of e-mail and faxes sent over, for example, known SMTP servers or fax boards 24 further connected to the PBX 18. Thereby communication output means 20 permits a user to engage communication output means 20 to forward data or information requested by a user in accordance with communication input means 21, for example, more detailed information on particular products or services of the advertiser who has engaged the use of the billboard.

It should be understood that the billboard also permits advertisers who have engaged the use of a billboard to broaden the marketing impact of an billboard. While prior art billboards are often product specific, the billboard of the present invention permits an billboard to promote a particular brand, whereas the data delivery system 14 is used to permit users to access information on particular products that form part of a broader umbrella brand. Therefore the billboard of the present invention is adapted to permit the extension of the marketing impact to a greater variety of products than conventional billboards permit.

Further connected to the PBX 18 is a software means (not shown) comprising a command module 28. The command module 28 provides means for programming software means, in a manner that is well known, with settings defining a series of processing steps determining a particular processing cycle of PBX 18, as well as defining the data or information that can be accessed in association with a particular communication tag.

An example of a processing cycle is now illustrated. For example, in an billboard of the present invention that has been engaged by an auto manufacturer, a communication tag consisting of a telephone number is

given. The advertising displayed by the billboard relates in this example to an automobile product. While the amount of information that can be displayed at the billboard may be limited because of the size thereof, the requirement that information be of a certain size in order to be visible, and also because too much information may distract drivers, a telephone number, in the present example, permits a driver (preferably in hands-free, voice recognition mode) to call the telephone number presented by the billboard using a cell phone and thereby to access the data delivery system 14. Alternatively, a person having viewed the billboard of the present invention may call the telephone number while walking by the billboard, or having made note of the telephone number, may call the billboard at a later time. A menu tailored to the automobile product (as discussed above) permits the driver to access, for example, information on price offerings on a particular model via the voice recognition capable menu provided by the data delivery system 14. The driver may also direct the data delivery system 14 to forward further information or direct marketing material to an postal address, email address or fax number by means of the same menu.

It should be understood that in accordance with the present invention, the billboard combined with the operation of data delivery system 14 of the present invention constitutes an advertising data gateway.

In the preferred embodiment of the data delivery system 14 of the present invention, PBX 18, communication server 22 and software means are connected to a server 30 with an operating system for hierarchical operation of the functions of the data delivery system 14. In the preferred embodiment of the data delivery system 14, the server 30 comprises a WINDOWS NT™ server, provided in a manner that is well known.

It should be further understood that the data delivery system 14 of the present invention also contemplates the processing of said requests by

means of Internet including e-mails, hypertext documents, or wireless pager instructions, also in a manner that is well known.

5 The operation of data delivery system **14** of the present invention is best illustrated by way of example. Command module **28** is used to program software means so that when a particular communication is received by the data delivery system **14**, such as a call to a particular telephone number or particular Internet request, or a sub-selection accessible at such telephone number or web address is selected, in a manner that is well known, one or
10 more options is provided to a user. These options may be provided by a menu of items or other series of requests/commands, in a manner that is also well known.

15 The data delivery system **14** supplies, in this particular embodiment of the present invention, the phone number (or Internet identifier such IP address or "cookie"), time of call, date of call, duration of call (used to see how long they listen to a particular set of messages), the extension accessed (each piece of information or ad will have a unique extension number the caller must enter to access the recorded information), and the source of the
20 call (for example, the caller must key in "1" if calling from a newspaper, "2" if calling from a "Flyer", "3" if they are calling from the billboard in the case of a multiple medium advertising program, in which the billboard is one medium). The data delivery system **14** may obtain (in predetermined circumstances) the name, address or other contact data of the caller. The system of the present
25 invention also permits authorized users thereof to generate a "call report" based on the name, address or other contact data of a caller having contacted the data delivery system **14**, as well as the parameters of such communication, including duration of communication, selections of the user from the menu, and so on. Then, the data or information requested such as a
30 "free offer" or product specifications will be transmitted to the caller by means of the contact data and communication server **22**, for example, by faxing the information requested to the number or email address given by the caller.

It should also be understood, that the data delivery system **14** provides remote functionality **32** that permits clients of the operator of the data delivery system **14** to remotely distribute sound, video, text, information or other material through the communication system **16**, and also to permit controlled changes to software means and therefore a particular processing cycle to which the clients have subscribed. This feature is provided in a manner that is well known by the remote content control means of the present invention. In particular a system of limited and hierarchical access is employed wherein a particular user of a customer of the operator of the data delivery system **14** is provided with access to remote functionality **32**, in accordance with parameters set by access privileges defined for such particular user. For example, the present invention permits distribution of a particular ad accessible through the data delivery system **14** by contacting same and uploading specific data or information. Advertisements or other material distributed using the data delivery system **14** can be modified or replaced using the remote functionality **32**. It should be also understood that remote functionality **32** can be provided to communicate with the communication network, as best shown in Fig. 3, so as to permit authorized users of a customer of the operator to modify content of the billboard remotely where billboard is an electronic billboard, in a manner that is well known.

The data collected by the data delivery system **14** from a user is provided to database **23** (for example data regarding the specific information accessed by a particular user by means of the data delivery system **14**). This data can be analyzed in a manner that is well known. The entity or entities engaging use of the billboard may then in response to such data modify the data, information or options provided by the data delivery system **14** in relation to a particular communication tag, for example by means of remote functionality **32**.

It should also be understood that the method described above provides the opportunity for various sellers to share the costs of advertising and direct marketing including: the cost of engaging use of the billboard; the cost of maintaining the communication network; the cost of producing and/or delivering the direct marketing material; and the cost of any additional incentives such as contest prizes.

The system of the present invention is best understood as a data delivery system **14** that is associated with a billboard, as described herein, and adapted to communicate with a plurality of users by means of a communication tag. The computer product of the present invention is best understood as a software program resident on the data delivery system **14** that permits predetermined menus, data and information to be offered, corresponding to a communication tag, and which data and information can be "pulled" by a plurality of users. The method of the present invention consists of providing the system of the present invention, receiving communication from a plurality of users using a communication tag, the plurality of users accessing menus, data and information in regard to a communication tag, and plurality of users forwarding further data and information to phone number, postal address, email address or fax number in response to input received from the plurality of users.

In a second preferred embodiment of the present invention, the data delivery system **14** is integrated with an interconnected network of computers such as the Internet. In this second preferred embodiment, the communication tag is an URL corresponding to a web site **50** that is associated with billboard, or the promotion to which billboard relates. Web site **50** is accessible via mobile browsers on cell phones, two-way pagers, personal digital assistants, personal computer and the like. The menu, and data and information related to the billboard or promotion, discussed above, as well as related video, audio content etc. is accessible via web site **50**. Specifically, data delivery system **14** and web site **50** is provided in a manner

that is known wherein clicking on specific items on web site 50 such as text/graphic listings of options launches audio recordings retrieved from data delivery system 14 in a manner that is well known. Web site 50 also provides means for "pulling" data such as information regarding "free offers", specifications on specific products and the like.

In a third preferred embodiment of the present invention, the billboard system is connected to a known e-commerce facility which permits the purchase of goods or services associated with the billboard system, as described above, via the Internet, in a manner that is well known.

Other variations and modifications of the invention are possible. For example, the examples of operation of the data delivery system 14 provided focused on voice applications. It should be understood that the menus, and data and information accessed and forwarded via, provided by it can be provided in other media. It should also be understood that additional features and or interfaces with other forms of communication can be provided to communication server 22. All such modifications or variations are believed to be within the sphere and scope of the invention as defined by the claims appended hereto.